

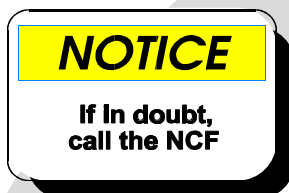
SUBJECT : Advanced Weather Interactive Processing System (AWIPS) Dial-out Modem Setup for AWIPS Build 4.2.2 Sites

PURPOSE : To increase the AWIPS Build 4.2.2 dial-out modem baud rate to 14.4 Kbps. and to verify the Simpack configuration file line speed is set to 14.4 Kbps.

SECURITY LEVEL : root/fxa

BACKGROUND

Since the implementation of AWIPS Build 4.2.2, and the Radar Multiple Request (RMR) feature, an increased number of sites have experienced dial-out modem hangs (DR 4641). The Network Control Facility (NCF) increased the dial-out modem speed in Peducah, KY and found a decrease in dial-out hangs. **This System Administration Note instructs field sites to change the AWIPS dial-out modem speed from 9.6 Kbps to 14.4 Kbps.**



If there is a problem with any part in this procedure or if a procedure produces unexpected results, call the NCF at (301) 713-1284.

The modem front panel button functions are described below and are shown as they appear when facing the rack (modem rotated 90 degrees from the stand-alone version).



Return key - when pressed within a branch of the menu, changes the Liquid Crystal Display (LCD) to the branch title screen (e.g. **TERMINAL OPT'S**). When pressed at a branch title screen, changes the LCD to the home screen (e.g. **DATA 14400 T/D?**).



Down key - moves from branch to branch from the main menu and selects individual setting options within the branches.



Across key - moves the screen along the branches of the modem menu tree. It also will move the cursor across data entry menus one character (or digit) at a time (e.g. **S-Reg** menus).
















Enter key - selects the item displayed on the LCD as the current setting (if the screen displayed an = sign, it was already the current setting) or initiates an action (as in "Reinit Memory?").

PROCEDURE

A. Changing the Modem "Max Rate=" and "DTE Rate=" settings from "9600" to "14.4"









The complete modem verification procedure is described in the *AWIPS Information Note 7*. Locate the AWIPS dial-out modems in the AS1 rack and verify that the line configuration reflects a "Max Rate=14.4 and a DTE Rate=14.4. To change the settings, follow the procedure outlined below:

1. Changing the modem "Max Rate=" to "14.4."
 - a. Press **Down**  button to advance to "MODULATION OPTION."
 - b. Press **Across**  button to advance to "MAX RATE=."
 - c. Press **Down**  button until "14.4" is displayed.
 - d. Press **Enter**  button.
 - e. Press **Return**  button once.
2. Changing the modem "DTE Rate=" to "14.4."
 - a. Press **Down**  button to advance to "TERMINAL OPTION."
 - b. Press **Across**  button to advance to "DTE RATE=."
 - c. Press **Down**  button until "14.4" is displayed.
 - d. Press **Enter**  button.
 - e. Press **Return**  button twice.
3. It is important to verify that the NEXRAD and AWIPS modems have the proper signal quality (SQ) level. The SQ level may be verified and set by performing the built-in test procedure below.
 - a. Press **Return**  button twice to reach the home screen.
 - b. Press the **ACROSS**  key to advance to "Phase Jitter = __dg."
 - c. Press the **DOWN**  key to advance to "SQ = __ EP = __%."

NOTE: The SQ level should be between 5 and 9, with 9 being the highest or best reading. If the SQ level is less than 5, the TX output level at the other end should be adjusted in 1 dBm increments until the SQ reading is between 5 and 9.



Line echoing caused by radical power increases will degrade the signal quality. Therefore, it is important to perform the SQ level check in gradual increments. This check should be performed on both ends of the circuit.

4. **Do not save changes unless all settings were entered correctly.** To return to the previously saved settings, power down the modem, and repeat steps 1 and 2. To save the modem setup changes, perform the following procedures:
 - a. Press the **Across**  button until "Save Changes = 1" is displayed.
 - b. Press the **Down**  button twice until "Save Changes = 3" is displayed.
 - c. Press **Enter** .
 - d. Press the **Return**  button twice.
 - e. Press the **Across**  button until "Power Up In = 1" is displayed.
 - f. Press the **Down**  button twice until "Power Up In = 3" is displayed.
 - g. Depress **Enter** .
 - h. Depress the **Return**  button twice.

This completes the modem setup procedure.

B. Verifying the Simpack Configuration File

The “fw1000_pvc6.setup” and the “fw1000_hdlc6.setup” files in the “/opt/freeway/bin” directory should already reflect a 14.4 Kbps data rate. The instructions below describe the procedure to verify the data rate in the Simpack configuration file for the AWIPS dial-out modems.

1. Log in to DS1 as **root** and type:

su -fxa

2. Type **cd /opt/freeway/bin** to change to the location of the “pvc” and “hdlc” file.
3. Type **vi fw1000_pvc6.setup**
4. Locate the line that reads “**RATE(XXXXX)**” and verify that it reads “**RATE(14400)**”.

NOTE: The “pvc” and “hdlc” file baud rate must match the modem speed.

5. Type **:wq!** to save the file or **:q!** if no changes have been made.
6. Type **vi fw1000_hdlc6.setup**
7. Repeat steps 4 through 5.
8. If changes were made reset the Radar line, port 6, by typing **icpReset1**.

This completes the Simpack configuration file edit procedure.